



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,846	10/05/2001	Gary L. Sugar	30014380.0004	1598
27896	7590	05/27/2005	EXAMINER	
EDELL, SHAPIRO & FINNAN, LLC 1901 RESEARCH BOULEVARD SUITE 400 ROCKVILLE, MD 20850			JAIN, RAJ K	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/970,846

Applicant(s)

SUGAR ET AL.

Examiner

Raj K. Jain

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-145 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-125 is/are allowed.
- 6) ☒ Claim(s) 126-145 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date vary.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims **1-145** examined on the merits.

### *Claim Objections*

Claims 5 & 6 are objected to because of the following informalities: The subject claims are duplicate in nature. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 126-129, 136-138, 140-142, 144 and 145 are rejected under 35 U.S.C. 102(b) as being anticipated by Baum et al (US005828660A).

Regarding claims 126, 136, 140 and 144, Baum discloses a method for enabling concurrent wireless transmission of first and second signals which at least partially overlap in frequency from a wireless communication device without substantial interference between the signals and degradation thereof the first signal having a wide frequency bandwidth relative to that of the second signal, the method comprising steps of:

- filtering out from the first signal a portion of its frequency bandwidth to generate a filtered signal, whereby a frequency location and bandwidth of the second signal

Art Unit: 2664

coincides with the portion of the frequency bandwidth filtered out from the first signal(see Fig. 3, col. 18 lines 15-28 receiver 316 filters the incoming signals); and

- adding the second signal to the filtered signal to generate a composite signal (see Fig. 3, col. 4 line 40, col. 13 lines 37-53);

- transmitting the composite signal from the wireless communication device (see Fig. 3, col. 18 lines 4-14).

With respect to claim 144, Baum further discloses an upconverter within the transmitter 325 (Fig. 3, see col. 16 lines 1-14, since an upconverter is provided at the transmission side for combining and amplifying the signal prior to transmission, one skilled in the art can readily appreciate, that an appropriate downconverter respectively will be incorporated at the receiver for demodulating downconverting and filtering the transmitted signal as appropriate.

Regarding claims 127, Baum discloses signal attenuation (see col. 4 lines 35-40).

Regarding claims 128, 137, 141, Baum discloses group filtering and signal amplification and termination (see col. 17 lines 15-32).

Regarding claims 129, 138, 142, Baum discloses composite signal formation of two or more varying overlapping signal components where one signal may be OFDM and another may be TDMA or CDMA or combination of timeslot and frequency allocations (see col. 4 lines 24-55).

Art Unit: 2664

Regarding claims 145, Baum discloses a digital signal processor (see Fig. 4, ref. 400, col. 17 line 61 – col. 18 line 4).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 131-135 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunsinger et al (US006563880B1).

Regarding claims 131, 133, Hunsinger discloses an apparatus (Fig. 1) for enabling concurrent wireless transmission of first and second signals which at least partially overlap in frequency from a wireless communication device without substantial interference between the signals and degradation thereof, the first signal having a wide frequency bandwidth relative to that of the second signal, the apparatus comprising:

- a first modulator that supplies the first signal (Fig. 2, ref 39);
- a second modulator that supplies the second signal (Fig. 2, ref 21); and
- a notch filter having a selectable center frequency and an elimination bandwidth,

the notch filter receiving as input the first signal in order to filter out a portion of its frequency bandwidth at the selectable center frequency and outputting a filtered signal

Art Unit: 2664

(see Figs 19, 20, ref 105, col. 19 lines 41-55, the notch filter eliminates unnecessary signal components from the composite signals received); and

-an upconverter coupled to the second modulator for upconverting the second signal to a desired frequency and to output an upconverted signal, whereby the frequency location and bandwidth of the upconverted signal coincides with the portion of the frequency bandwidth filtered out from the first signal an adder coupled to the upconverter and to the notch filter and receiving as input the filtered signal and the upconverted signal to generate a composite signal for transmission, (see Fig 2, col. 6 lines 49-57, the upconverter 23 converts the FM signal or in this case the second signal to the desired center frequency and than the signal is supplied to the signal adder 9 for combining the first filtered signal with the second signal and generating an composite signal for transmission.).

Regarding claim 132, Hunsinger discloses signal attenuation via modulator 39 (see Fig. 2, col. 14 line 61 – col. 15 line 10).

Regarding claim 134, Hunsinger discloses digital processes implemented within the system (see Fig. 2, col. 6 lines 16-24).

Regarding claim 135, Hunsinger discloses a notch filter implemented to control any signal to the selectable center frequency (see Figs 19, 20, ref 105, col. 19 lines 41-55, the notch filter eliminates unnecessary signal components from the composite signals received).

Art Unit: 2664

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 130, 139, and 143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baum et al (US005828660A) in view of Bishop et al (US006377782B1). Baum discloses a method for enabling concurrent wireless transmission of first and second signals, which at least partially overlap in frequency from a wireless communication device without substantial interference between the signals and degradation thereof.

Baum fails to disclose the use of Bluetooth and or 802.11 IEEE standard protocols within its invention.

Bishop discloses the use of Bluetooth and or 802.11 IEEE standard protocols within its invention (see Fig. 2, col. 9 lines 37-50, col. 10 lines 44 -51).

Both Bluetooth and IEEE 802.11 wireless communication standards allow for short-range radio links between electronic devices. In general, these standards allow for point-to-point or point-to-multipoint wireless communications. The Bluetooth standard is generally used in wireless personal area networks (WPAN) and allows users to transfer information between mobile PCs, mobile phones and other devices. The IEEE 802.11 standard is generally used for wireless local area networks (WLAN) and may be used to communicate between PCs, PDAs, and other computing devices. Both offer the advantage of allowing a user or users to establish communications between two or

Art Unit: 2664

more electronic devices for a data transfer without the need for cumbersome cabling and connectors.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate both of these technologies as taught by Bishop within Baum and therefore offering the advantage of allowing a user or users to establish communications between two or more electronic devices for a data transfer without the need for cumbersome cabling and connectors.

***Allowable Subject Matter***

Claims 1-125 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 24, 47 and 68, the prior discloses a wireless communications system with plurality of wireless communication devices communicating in a frequency band using first and second protocols for communications.

The prior art does not teach or fairly suggest a method for transmitting a guard packet from a first communication device in accordance with the first communication protocol, the guard packet being formatted to alert and inform communication devices that use the first communication protocol to refrain from communication for a period of time in the frequency band to enable transmission of information from, or reception of information by, the first communication device.



Art Unit: 2664

Regarding claims 74, 94, 95, 96, 98, 102-104, 120, 121, and 122, the prior discloses a wireless communications system with plurality of wireless communication devices communicating in a frequency band using first and second protocols for communications and having resolution for interference mitigation.

The prior art does not teach or fairly suggest prior to transmission of a plurality of time slots in the frequency band using a communication protocol, determining frequencies associated with each of the plurality of time slots of the communications frame using the second communications protocol of a multiprotocol system.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Art Unit: 2664

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

R. Jain

RJ

May 18, 2005